

IN THE CLAIMS

Please amend claims 1 and 2 as follows:

1. (CURRENTLY AMENDED) A multiple electrode for measuring electro-physiological characteristics of a biological specimen, comprising:

a substrate;

~~a plurality of micro-electrodes provided on a first region on the a substrate; and~~

~~a reference electrode provided in a second region on the substrate,~~

~~wherein on the substrate, there is a first region for placing the biological specimen and a second region which is way from the first region, wherein~~

~~the plurality of micro-electrodes are located in the first region and the plurality of micro-electrodes include at least one measurement electrode and at least one stimulus electrode, and~~

~~the reference electrode is located in the second region, and the reference electrode includes at least one measurement reference electrode and at least one stimulus reference electrode which is different from the at least one measurement reference electrode~~

~~the reference electrode includes at least one stimulus reference electrode for applying an electrical signal to the plurality of micro-electrodes, and~~

~~wherein the biological specimen is placed in such a manner as to overlap with the first region and not to overlap with the second region.~~

2. (CURRENTLY AMENDED) A multiple electrode according to claim 1, wherein ~~the reference electrode includes the at least one measurement reference electrode detects for detecting an electrical signal from the plurality of micro-electrodes, and the at least one stimulus reference electrode is electrically insulated from the at least one measurement reference electrode.~~

3. (PREVIOUSLY PRESENTED) A multiple electrode according to claim 1, wherein the second region is placed at a distance from an outer edge of the first region, and surrounds the first region.

4. (CANCELLED).

5. (PREVIOUSLY PRESENTED) A multiple electrode according to claim 3, wherein the distance is set to a value such that an electrical signal generated from a micro-electrode receiving an applied electrical signal is detected, and electrical noise generated from a micro-electrode receiving no applied electrical signal is not detected.

6. (PREVIOUSLY PRESENTED) A multiple electrode according to claim 2, including a plurality of stimulus reference electrodes and a plurality of measurement reference electrodes, and the plurality of stimulus reference electrodes or the plurality of measurement reference electrodes are substantially symmetrically provided with respect to a center of the first region.

7. (PREVIOUSLY PRESENTED) A multiple electrode according to claim 1, wherein the plurality of micro-electrodes are arranged in a matrix within the first region.

8. (PREVIOUSLY PRESENTED) An integrated cell installer comprising a multiple electrode according to claim 1, wherein the integrated cell installer has a cell installing region for placing a biological specimen on the substrate of the multiple electrode.

9. (ORIGINAL) A cellular potential measuring apparatus comprising: an integrated cell installer according to claim 8; an output signal processor connected to the micro-electrodes for processing an output signal due to an electro-physiological activity of a biological specimen; and a stimulus signal provider for optionally providing an electrical stimulus to the biological specimen.

10. (ORIGINAL) A cellular potential measuring system comprising: a cellular potential measuring apparatus according to claim 9; and an optical monitoring apparatus for optically monitoring a biological specimen; and/or a cell culture apparatus for controlling the culture environment of the biological specimen.